

## Health, Ecology and the Environment Sub-committee Report

June 13, 2003

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### Development and implementation of a “Binational Plan for the Attention of Harmful Algal Blooms.”

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- Project Leaders:
- Dr. Jorge Nicolas Chantiri Perez, Health Regulation and Promotion Director, Government of the State of Veracruz Health Services
  - Lic. Juan Manuel Irigoyen Lopez, General Coordinator, Papaloapan River Basin Development Council
  - Bryon O. Griffith, Acting Director, U.S. Environmental Protection Agency Gulf of Mexico Program Office
  - Joe Stinus, Director, U.S. National Oceanic and Atmospheric Administration – National Coastal Data Development Center

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#### Other Organizational Collaborators:

	<u><b>Mexico</b></u>	<u><b>U.S.</b></u>
-- STATE	<ul style="list-style-type: none"> <li>- Health Service Agencies</li> <li>* Tamaulipas</li> <li>* Veracruz</li> <li>* Tabasco</li> <li>* Campeche</li> <li>* Quintana Roo</li> <li>* Yucatan</li> </ul>	<ul style="list-style-type: none"> <li>- Health Service Agencies</li> <li>* Alabama</li> <li>* Florida</li> <li>* Louisiana</li> <li>* Mississippi</li> <li>* Texas</li> <li>- Florida Marine Research Institute</li> <li>- Gulf of Mexico Gulf States Accord</li> </ul>
-- FEDERAL	<ul style="list-style-type: none"> <li>- COFEPRIS</li> <li>- SEMARNAT</li> <li>- Water Commission</li> </ul>	<ul style="list-style-type: none"> <li>- NOAA – Coastal Services Center</li> <li>- NOAA – National Data Buoy Center</li> <li>- NASA – Earth Sciences Application Directorate</li> <li>- Naval Research Laboratory</li> <li>- EPA</li> </ul>
-- ACADEMIA	<ul style="list-style-type: none"> <li>- University of Veracruz</li> <li>- Research Institutes of Veracruz</li> </ul>	<ul style="list-style-type: none"> <li>- University of South Florida</li> <li>- University of Texas</li> <li>- University of Southern Mississippi</li> <li>- Texas A&amp;M</li> <li>- University of New Orleans</li> </ul>
-- Non-Government	<ul style="list-style-type: none"> <li>- Aquarium of Veracruz</li> <li>- Institute of Ecology</li> </ul>	<ul style="list-style-type: none"> <li>- Mote Marine Laboratory</li> </ul>
--International	United Nations Environment Programme	

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## BACKGROUND

On June 10-11, 2003, the U.S. Environmental Protection Agency – Gulf of Mexico Program Office, in cooperation with the Co-Chairs of the Gulf of Mexico States Accord's (GoMSA) Health, Ecology and the Environment Subcommittee, hosted the 1<sup>st</sup> Binational Collaboration Workshop on Red Tide Programs in New Orleans, Louisiana. The workshop was attended by a total of 65 technical and managerial experts of both countries.

The workshop resulted in development of the foundational components of a Binational Plan for the Attention of Harmful Algal Blooms in the Gulf of Mexico. Additionally, the workshop resulted in a unanimous agreement and commitment to jointly pursue the implementation of 4 specific elements of the plan which will unify and enhance the red tide technical program management capacity of the 11 binational states bordering the Gulf of Mexico. These 4 elements involve:

- (1) Integrating and standardizing sampling methods and protocols;
- (2) Establishing a first-level coastal observing system infrastructure;
- (3) Extending NOAA's near real time remote sensing capacity for detecting and analyzing the movement of red tide blooms to Mexico; and,
- (4) Establishing the basic information technology capacity to integrate these observational tools into the 11 States red tide event response programs.

The following outlines the specific project actions and supporting activities that will be collaboratively undertaken by this Binational Plan:

### **Project 1**

Conduct a contractually assisted collaborative review of the current state of *Karenia brevis* (a.k.a., Red Tide) monitoring, sampling and reporting protocols utilized by the 11 binational states bordering the Gulf of Mexico. The objective of this analysis will be to provide specific recommendations for a single agreeable set of reporting standards and approaches.

The further objective of this activity will be to isolate and identify the most appropriate Internet medium for the access and delivery of these data resources and develop and implement the required data entry and retrieval systems (e.g., extensions of the capacity of the Northern Gulf Harmful Algal Blooms Observing System (HABSOS) Pilot).

Schedule:

**Complete by: March 2004**  
(In time to conduct review at GoMSA Annual Mtg.)

	<b>Activities</b>	<b>Lead Organization(s)</b>	<b>Budget</b>
1.1	Secure Contractual Assistance	Gulf of Mexico Program Office	\$50 – 100K
1.2.1	Study Coordination (Mexico)	Ministry of Health - COFEPRIS SEMARNAT National Water Commission	N/A
1.2.2	Study Coordination (U.S.)	Gulf of Mexico Program Office	N/A
1.3	Internet Portal – Sampling Data Entry and Retrieval Tool Development	NOAA – National Coastal Data Development Center	N/A – Tech Transfer
1.4	Training & Implementation	Plan A: Gulf of Mexico Coastal Ocean Observing System (GCOOS)	\$20 – 30K (Pending Successful Award)

## Observing System Framework Development:

### Project Action 2

Initiate the deployment of a strategic pattern of physical oceanographic/meteorologic sensors for the purpose of extending the developing predictive capacity of the Binational Plan for the Attention of Red Tide.

The objective of this activity is to secure the collaborative participation of each of the six States of Mexico bordering the Gulf of Mexico. Consequently, the objective of this proposal is to deploy, operate, and maintain a minimum of 6 fixed and/or moored stations (i.e., one in each Gulf State of Mexico) as determined by Mexico's coordinating team's Strategic Deployment Plan.

Schedule:

**Complete by: December 2004**

1.25 Federal Fiscal Years beginning from FY04.

	<b>Activities</b>	<b>Lead Organization(s)</b>	<b>Budget</b>
2.1	Develop Recommended Technical Specifications for Coastal Observing System Stations	University of South Florida (Coordinator) NOAA – National Data Buoy Center HABSOS State Technical Team (Technical Consultants)	N/A – Tech Transfer
2.2	Develop and Coordinate the Implementation of a Strategic Deployment Plan	(Coordination Team) - COFEPRIS - State Health Services - SEMARNAT - National Water Commission	N/A
2.3.1	Systems Acquisition and Deployment (Fixed Near Coastal – Eastern, Central, Western Gulf Coast of Mexico)	Papaloapan Development Council	N/A – Prior Funded
2.3.2	Systems Acquisition and Deployment (Moored Open Blue Water – Quintana Roo)	University of South Florida	N/A – Prior Funded
2.3.3	Systems Acquisition and Deployment (3 – 6 Fixed or Moored Stations) Plan A: Gulf of Mexico Coastal Ocean Observing System (GCOOS) Proposal Submitted to NOAA Request for Proposals	United Nations Environment Programme	\$409K (Pending Successful Award)
	Contingency Plan B: GoMSA Finance Committee Support (i.e., World Bank)	GoMSA Finance Committee	\$409K
2.4.	Sensor Operations and Maintenance – (Short Term – 2 yrs.) Plan A: Gulf of Mexico Coastal Ocean Observing System (GCOOS) Proposal Submitted to NOAA Request for Proposals	Gulf of Mexico Program	\$100K (Pending Successful Award of 2.3.3)
	Contingency Plan B: GoMSA Finance Committee Support (i.e., World Bank)	GoMSA Finance Committee	\$100K
2.5	Sensor Operations and Maintenance – (Long Term)	SEMARNAT / National Water Commission / _____?	TBD
2.6	Internet Portal Management and Operations	NOAA – National Coastal Data Development Center	N/A – Tech Transfer

**Project 3**

Develop a collaborative near real time remote sensing capacity for the purpose of extending the developing capacities of space-based and airborne sensors to remotely detect and/or forecast the occurrence of Red Tide blooms in the Gulf of Mexico.

Schedule:

**Complete by: March 2004**

1.25 Federal Fiscal Years beginning FY04.

	<b>Activities</b>	<b>Lead Organization(s)</b>	<b>Budget</b>
3.1	Extend U.S. HABSOS Bulletin Program to the Gulf States of Mexico	NOAA – Coastal Services Center	N/A – Tech Transfer
3.2	Develop and Implement Field Verification Program	(Coordination Team) - COFEPRIS - State Health Services - SEMARNAT - National Water Commission	N/A
3.3.1	Conduct Technical Gap Analysis – re: Field Sampling and Verification Capacity	Gulf of Mexico Program State Health Services (Mexico)	Will be Covered Under Activity 1.1 – Contractual Study
3.3.2	Present Technical Gap Analysis and Supporting Recommendations to Follow-up Workshop (re: GoMSA Annual Mtg. – March 04)	Gulf of Mexico Program State Health Services (Mexico)	N/A
3.3.3	Develop Supporting Implementation Plan	TBD by results of 3.3.2	TBD by results of 3.3.2
3.5.1	Conduct HAB Research Needs Assessment – Phase 1 (Rapid Short-term Inventory and Prioritization)	University of South Florida (Coordinator) Mexico Coastal Research Network U.S. Coastal Research Network (Collaborators)	N/A – Tech Transfer
3.5.2	Conduct HAB Research Needs Assessment – Phase 2 (Comprehensive Integrated Inventory)	TBD	TBD – Plan A: Anticipating the Opportunity to Submit for Assistance Under NOAA's Harmful Algal Blooms and Hypoxia Research and Control Act (HABHRCA) Reauthorization in FY04
3.6	Internet Portal Development, Management and Operations	NOAA – National Coastal Data Development Center	N/A – Tech Transfer

**Project 4**

Establish a compatible baseline level of information technology capacity (e.g., systems and training) within the collaborating programs throughout the six States of Mexico so as to effectively engage the descriptive and predictive capacity of HABSOS gulfwide.

Schedule:

**Complete by: September 2004**  
**(1<sup>st</sup> complete fiscal year)**

	<b>Activities</b>	<b>Lead Organization(s)</b>	<b>Budget</b>
4.1	Update / Revise the Current HABSOS Needs Analysis to Include Mexico's Gulf State Program Needs	NOAA – National Coastal Data Development Center Gulf of Mexico Program Office	Contractual Service Requirements Covered Under Activity 1.1 – Contractual Study
4.2	Conduct Information Technology Gap Analysis	NOAA – National Coastal Data Development Center Gulf of Mexico Program Office	Contractual Service Requirements Covered Under Activity 1.1 – Contractual Study
4.3.1	Present Gap Analysis and Supporting Recommendations to Follow-up Workshop (re: GoMSA Annual Mtg. – March 04)	NOAA – National Coastal Data Development Center Gulf of Mexico Program Office	N/A
4.3.2	Develop Supporting Implementation Plan	TBD by resulting actions taken in 4.3.1	TBD by resulting actions taken in 4.3